

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
26 May 2005 (26.05.2005)

PCT

(10) International Publication Number
WO 2005/048122 A1

(51) International Patent Classification⁷: **G06F 17/00**,
G06N 5/02

(74) Agents: SAMUELS, Steven, B. et al.; Woodcock Was-
burn LLP, One Liberty Place - 46th Floor, Philadelphia, PA
19103 (US).

(21) International Application Number:
PCT/US2003/034977

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 31 October 2003 (31.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (*for all designated States except US*): **ABB
RESEARCH LTD.** [CH/CH]; P.O. Box 8231, CH-8050
Zürich (CH).

(84) Designated States (*regional*): ARIPO patent (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

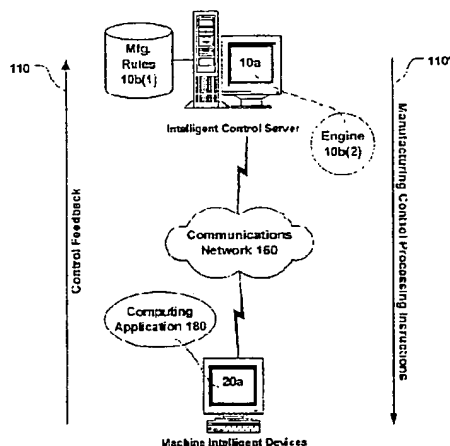
(75) Inventors/Applicants (*for US only*): **BAYOUMI, Deia,**
Salah-Eldin [EG/US]; 2621 Hidden Meadow Drive,
Fuquay, VA 27526 (US). **JULIAN, Danny, E.** [US/US];
7021 Landingham Drive, Willow Spring, NC 27592 (US).

Published:

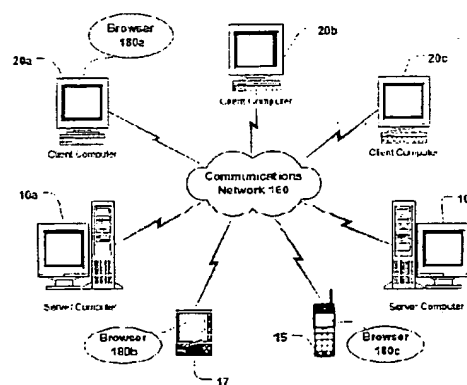
— with international search report

[Continued on next page]

(54) Title: INDUSTRIAL INFORMATION TECHNOLOGY (IT) ON-LINE INTELLIGENT CONTROL OF MACHINES IN DIS-
CRETE MANUFACTURING FACTORY



b



a

(57) Abstract: The invention contemplates a system and method offering control and management of manufacturing resources (Machine 1, Machine 2 . . . Machine n) to obtain optimal manufacturing capacities and to avoid manufacturing down-time currently realized through manual operation and control of manufacturing resources. In an illustrative implementation, the present invention contemplates an exemplary control computing application (180) operating in a computing environment (100) which communicates with, cooperates with, and provides control over at least one manufacturing resource (e.g. manufacturing machine - Machine 1, Machine 2, . . . Machine n). The computing application (180) provides at least one instruction set (110') for use in controlling the manufacturing resource. The communication of the instruction set may be realized local to the manufacturing resource, remotely from the manufacturing resource, or some combination thereof.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.